
Aruba Networks delivers increased clinician mobility and patient satisfaction.



When clinicians asked for increased mobility to provide better patient care, Lausanne University Hospital (Centre Hospitalier Universitaire Vaudois or CHUV) used the opportunity to upgrade and expand their Aruba network from 300 to 1,300 access points to offer both enhanced coverage and patient and visitor access.

“The new Aruba network infrastructure offers increased mobility and flexibility for our clinicians and students. Now they have a Wi-Fi connection wherever they are on campus,” explains Fabrice Schindler, Network Manager at CHUV. “And our patients, their families, and visitors enjoy free Wi-Fi access to make their hospital experience more pleasant.”

Enabling increased mobility

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FABRICE SCHINDLER, NETWORK MANAGER, LAUSANNE UNIVERSITY HOSPITAL,
SWITZERLAND

A well-known center of medical education and research in collaboration with the Faculty of Biology and Medicine of the University of Lausanne and the Swiss Federal Institute of Technology in Lausanne (EPFL), CHUV is renowned for its academic achievements in health care, research, and teaching. Spread across five campuses consisting of over 100 buildings, CHUV provides a wide range of health services for 46,000 inpatients each year in addition to over 2,800 daily outpatient visits.



“Previously, Wi-Fi coverage was restricted to access by clinicians in patient areas and long-term patients only. We needed to expand our coverage to meet the increased mobility needs of the medical staff and students, in addition to offering Wi-Fi access to our patients and their families,” says Patrick Zahnd, project manager at CHUV. “We also have many mobile medical devices—such as scanners and cardiographs—that need to be attached to the network via a fixed IP address and capable of transferring images and results to our central location for processing and storage.”

Delivering enhanced patient care

Prior to attending to a patient, staff access the patient’s health records via a web application. Following each visit, they update the information. “IT allows the clinicians to be more efficient and productive. All of our data is in electronic format which means that any clinician attending to a patient has the latest information to ensure the best possible care,” says Schindler. “When a patient is admitted, we can quickly review previous visits, identify recurring symptoms, and see what treatments were provided.”



Ensuring continuity of service

“We’ve had Aruba installed since 2006 and we haven’t experienced any problems,” continues. “When we decided to expand the coverage to everyone and everywhere, our key requirements were continuity of service and easy deployment of the new infrastructure.”

After carrying out a proof of concept with both Aruba and alternate wireless networking vendors, CHUV decided to simply expand their existing Aruba deployment. Key differentiators were the stateless firewall, the centralized architecture where all network traffic crosses the controller, in addition to a fast, scalable deployment based on the existing infrastructure. CHUV replaced all of their previous equipment with new Aruba Mobility Controllers and Access Points.

Simple to deploy

CHUV expanded coverage across all five campuses and 100 buildings by increasing the number of access points from 300 to 1,300. Affordable and multifunctional [802.11ac APs](#) are easy to deploy with zero-touch provisioning, and maximize mobile device performance in medium-density Wi-Fi environments.

In addition, the [Aruba Mobility Controller](#) provides the capability to centralize traffic flows from thousands of APs and includes a powerful deep packet-inspection engine to identify, block, and quarantine unwanted mobile apps and devices.



The deployment provided CHUV with the scalability and performance they needed to support the more than 14,000 full and part-time employees, in addition to offering patients and visitors free Wi-Fi access with controlled bandwidth.

Simple to manage

CHUV deployed [Aruba AirWave](#) to analyze and correlate the wireless network data crossing the Mobility Controllers. AirWave is a powerful and easy-to-use network operations system that manages wireless, wired and remote access networks. It enables granular visibility across the entire access infrastructure and allows you to manage multiple generations of wired and wireless within a multi-vendor network—from controllerless to controller—and from legacy Wi-Fi to the latest 802.11ac WLANs.

[Aruba ClearPass](#) is also used by CHUV for guest authentication of patients, their families, and visitors. ClearPass offers device profiling capabilities to create device-specific enforcement policies for differentiated access and zero-day threat mitigation. User access privileges can be easily granted or denied based on device type, ownership status, or operating system.

“ClearPass makes it easy to authenticate patients and visitors via an easy-to-use portal with limited configuration and management on our side,” says Zahnd.

A seamless solution with reduced management overhead

“With an average of 5,000 devices connected to the network at any one time,” adds Schindler, “we have good, consistent performance to meet the needs of our staff and patients. We’ve also met our coverage goals and expanded from 300 to 1,300 access points without increasing our management overhead. Once the environment was deployed and ClearPass configured, everything is automated with low maintenance requirements so we really don’t have too much to do on a day-to-day basis.”

Enhanced staff and patient experience

Schindler sums it up: “For our patients, their families, and visitors, providing free Wi-Fi offers significant benefits. A hospital visit can be time consuming and stressful. Allowing them free access to the Internet via their smart phones provides a welcome distraction and makes for a more pleasant visit. And with the expanded coverage, our staff enjoys increased flexibility and mobility to do their jobs more efficiently. For example, rather than only being able to carry out an ECG in certain areas of the hospital, they can do it anywhere that makes sense for the patient. This enables our clinicians to be more productive. In addition, allowing them to access the Wi-Fi for their own personal use increases employee satisfaction.”

REQUIREMENTS

- Expand wireless coverage to increase employee flexibility and mobility

- Offer free Wi-Fi to patients, family, and visitors

- Provide enhanced, consistent performance across the entire campus

- Seamless deployment and integration with existing environment

SOLUTION

- 802.11ac Indoor APs

- 7200 and 3000 Series Mobility Controllers

- AirWave for network management

- ClearPass for access control

BENEFITS

- Increased clinician productivity and enhanced patient care.

- Increased employee flexibility and mobility.

- Enhanced patient, family, and visitor satisfaction

- Accelerated deployment and reduced wireless management overhead.

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